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The 8410 Voice Terminal

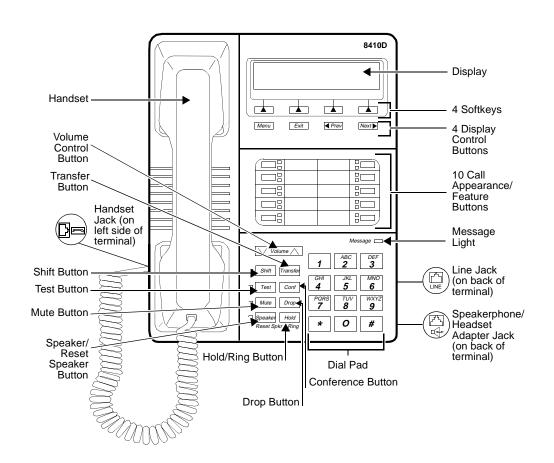


Figure 12-11. One Version of the 8410D Voice Terminal (with Display)

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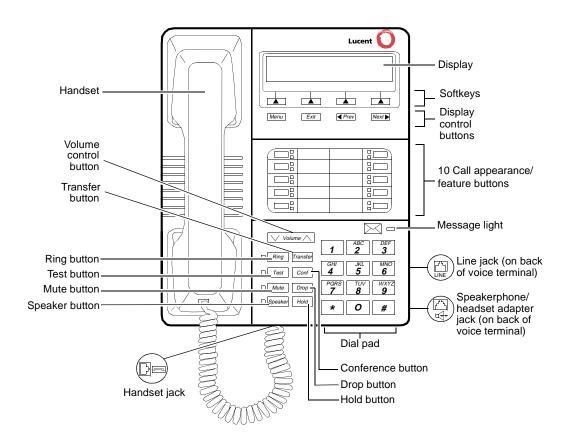


Figure 12-12. Another Version of the 8410D Voice Terminal

The 8410 voice terminal is a multi-appearance digital telephone with 10 call appearance/feature buttons, four standard fixed feature buttons (CONFERENCE, DROP, HOLD, and TRANSFER), a MUTE button, a SPEAKER button which can access either a 2-way speakerphone or a 1-way, listen-only speaker, a TEST button, and a Volume control button. In addition, some 8410 voice terminals have a blue SHIFT button; other 8410 voice terminals have a RING button instead.

There are two varieties of the 8410 voice terminal: the 8410B (8410D04A) is the basic set, without a display; the 8410D (8410D03A) has a built-in 2-line by 24-character display.

NOTE:

The 8410D01A and 8410D02A are older versions of this voice terminal and are no longer available.

Those users who have an 8410D with display can access 12 features with the softkeys and display control buttons. These 12 features can be used *in addition to* the features on the call appearance/feature buttons.

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The 8410 voice terminal can work in both 4-wire and 2-wire environments. For more information, see "Wiring Information."

Applications

The 8410 voice terminal can be used with the DEFINITY Communications System Generic 1, Generic 2, or Generic 3, the DEFINITY ECS, System 75, and System 85. This type of voice terminal is especially suitable for managers, executive secretaries, and other office support personnel who require access to multiple lines for call handling, call coverage, bridging, conferencing, and sophisticated voice communications. The display set can be used by those who have a need for calling party display capabilities or who require a large number of voice terminal features.

The 8410 voice terminals can also provide the user with simultaneous voice and data communications. The 8410 can be connected to a 7400B Plus Data Module. With the 8410 voice terminal, PC platform products can be useful in providing voice capabilities since these screen-based products can greatly enhance the telephone capabilities of these voice terminals.

Physical Features

Dimensions



The dimensions described here for the 8410 voice terminal are approximate.

Width = 7.8 inches

Depth (front to back) = 9.5 inches

Height (maximum with handset in place) = low position, 5.265 inches high position, 6.625 inches

Features

Eight Fixed Feature Buttons

The 8410 has the following eight fixed feature buttons:

- CONFERENCE (labeled CONF) button
- DROP button
- TRANSFER button
- A red HOLD button
- Either a blue SHIFT button or a RING button

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- MUTE button
- SPEAKER button
- TEST button

The SHIFT Button

Some 8410 voice terminals have a blue SHIFT button that can be used in the following ways: (The red light next to the SHIFT button goes on steadily when the button is activated.)

- Used with the HOLD button to select your own personalized ring from among eight available patterns
- Used with the SPEAKER button to perform an acoustic test of the environment and adjust the speakerphone to the surrounding acoustic environment for optimal performance

The RING Button

On other 8405 voice terminals, the user can press the RING button in order to select a personalized ringing pattern for the voice terminal. There are eight ringing patterns from which to choose.

Call Appearance/Feature Buttons

The 8410 voice terminal has 10 call appearance/feature buttons, each equipped with a red and a green status light. Usually, at least three of these buttons are administered as call appearances for the terminal's primary extension number, where calls are placed and answered. The rest of the buttons can be used for more call appearances (including bridged appearances of other stations' extensions) and features. Buttons administered for features have only their status lights active.

Message Light

The red Message light goes on when a message is left for the user. It goes off when the user retrieves the message or when the message is erased. This light is labeled either *Message* or .

Speakerphone

The 8410 voice terminal is equipped with a built-in speakerphone. (The voice terminal can be optioned for a 1-way, listen-only speaker instead.) The Speakerphone capability allows a user to engage in a hands-free conversation with the far-end party. The speakerphone can be turned on or off with the SPEAKER button; can be muted with the MUTE button, and the volume can be raised and lowered with the VOLUME "arrow" button.

If the voice terminal has a SHIFT button and *Rest Spkr* appears below the SPEAKER button, the user can access the Reset Speakerphone feature to adjust the speakerphone for optimal performance.

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If there is not a SHIFT button and Reset Spkr does NOT appear under the SPEAKER button, the voice terminal will adjust to the surrounding environment by itself. The user does not need to do anything manually.

By pressing the blue SHIFT button on the set and then the SPEAKER button (if the voice terminal is set for the Speakerphone feature), the user hears a set of tones as the speakerphone performs an acoustic test of the environment. When the tones stop, the speakerphone has finished adjusting itself and is ready for use. The user *must* reset the speakerphone in any of three instances: whenever the voice terminal is moved to another place (even in the same room), whenever the red light next to the SPEAKER button is fluttering, and, when, in the unlikely event, the speakerphone is making a squealing sound.

Speaker (Listen-Only) Feature

Although the 8410 voice terminal is shipped from the factory with the terminal set for the Speakerphone feature, the 8410 voice terminal can be optioned instead for a 1-way, listen-only speaker. If this is the case, use the SPEAKER button on the front of the voice terminal for turning on and off the speaker.

The Speaker (listen-only) capability allows a user to engage in a 1-way conversation with the far-end. Specifically, the user can only listen to the far-end. To speak with the far-end, the user must use the handset which turns off the speaker. The Speaker function may also be disabled.

MUTE Button

The MUTE button is a fixed feature button with a red status light. The MUTE button turns off the microphone of the built-in speakerphone or the handset so that a person can converse with another person in the room without the other party listening in.

VOLUME Control Button

The 8410 voice terminal has a VOLUME "arrow" button on the front of the set. This button has several functions. When the user is using the speakerphone or the 1-way speaker, the VOLUME button controls the volume of the speaker. When the user is on a call using the handset, the VOLUME button controls the handset volume. When the voice terminal is idle, the button controls the volume of the tone ringer.

When the user sets the volume for the speaker, speakerphone, handset, or the tone ringer, the display on the 8410D voice terminal shows a "bar array" that indicates the volume setting.

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TEST Button

When the voice terminal is initially powered up, the green light next to the TEST button flashes if the link with the PBX is not (or not yet) operational. The light changes to steady green when the voice terminal is able to communicate with the PBX. After the voice terminal is powered up, you can press the TEST button to test the lights and the display on your voice terminal.

Display

The display on the 8410D set has two lines with 24 characters on each line. The display, along with the softkeys and the display control buttons, can be used to access 12 softkey features (the default softkey features and the alternative softkey features are listed under "Softkeys").

Display Control Buttons

These four buttons are labeled Menu, Exit, ✓ Prev, and Next ►.

- Menu is used to enter Softkey Mode and access the 12 softkey features.
- Exit is used for exiting a display feature and returning to Normal (call-handling) Mode.
- Prev and Next ► can be used to go back and forth through the feature option screens.

Softkeys

The four buttons located below the display and labeled with arrows correspond to features listed on the second line of the display screen. (There are four features on each feature option screen.) The user can access any of the 12 features by pressing the softkey below the feature abbreviation.

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Below is a list of the 12 default softkey features assigned to the 8410 and the order in which they appear.

Table 12-10. Default Softkey Features on the 8410

Abbreviation	Feature
First Screen LWC	Leave Word Calling
CnLWC	Cancel Leave Word Calling
AutCB	Automatic Callback
Timer	Timer
Second Screen CFrwd ¹	Call Forward
CPark ²	Call Park
TmDay	Time/Date
PCall	Priority Calling
Third Screen Prog	Abbreviated Dialing Program
Pause	Abbreviated Dialing Special Function Pause
Mark	Abbreviated Dialing Special Function Mark
Wait	Abbreviated Dialing Special Function Wait

On a DEFINITY Generic 2 or on a System 85, this feature is named Call Forward-Follow Me.

On 8410D voice terminals (8410 terminals with a display) connected to a DEFINITY G3V3 or later, the System Manager can choose to administer alternate features for use with the softkeys. The following table lists some of the alternate softkey features, those features that can be substituted for the default softkey features listed on the previous page.

NOTE:

The DEFINITY ECS Release 5 (and later releases) may provide additional alternate softkey features.

NOTE:

With G3V3 and later switches, the system can download *BLANK* softkey labels for positions where there are no features administered.

^{2.} On a DEFINITY G2 and on a System 85, there is no Call Park feature that can be assigned to a feature button. In order to have the Call Park function on a softkey or hard button, administer the button as an Abbreviated Dial button and program the Call Park trunk group access code onto it. This button can then be labeled "Call Park." In addition, on a DEFINITY G2 or a System 85, the Recall feature must be administered on a standard feature button.

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Table 12-11. Alternate Softkey Features on the 8410 Connected to a DEFINITY G3V3 and Later

Abbreviation	Feature
AD	Abbreviated Dialing buttons (can be multiple AD buttons)
Cnslt	Consult
Count	ACD Stroke Count
CPkup	Call Pickup
Dir ¹	Directory
Excl	Manual Exclusion
HFAns ²	Internal Auto Answer
IAuto	Intercom Auto
IDial	Intercom Dial
Inspt	Inspect
Last	Last Number Dialed
RngOf	Ringer Off
SAC	Send All Calls
SFunc	Abbreviated Dialed Special Function
Spres	Abbreviated Dialing Special Function Suppress
Stats	View (ACD) Statistics
Stop	Abbreviation Dialing Indefinite Wait or Stop
View ³	Stored Number

A CALL DISPLAY button should be administered, if access to System Directory is provided. It is also desirable for a NEXT DISPLAY button to be administered. This feature is not available on a DEFINITY G2 or System 85.

^{2.} This feature is not available on a DEFINITY G2 or System 85.

^{3.} This feature is available only on a DEFINITY G3V2 (or later) switches.

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Other Physical Features

Handset

The 8410 voice terminal is equipped with a K-type handset.

Dial Pad

The 8410 voice terminal is equipped with a 12-button touch-tone dial pad. The letters "Q" and "Z" have been added to the appropriate dial pad keys for directory access, and the "5" button on the dial pad has raised bars for visually-impaired users.

Jacks

The 8410 voice terminal's housing has a Line jack located on the back of the housing, and a Handset cord jack located on the side of the set. There is also a Speakerphone/headset adapter jack to which the user can connect adjunct equipment.

Cords

Two cords are supplied with the 8410: a coiled 9-foot handset cord and a 7-foot line cord.

Optional longer cords are available: a 12-foot handset cord and 14-foot and 25-foot line cords.

Ringing

The 8410 voice terminal has electronic tone ringing with eight possible ringing patterns that can be selected with the RING button on some 8405 voice terminals; on other voice terminals, the user presses the SHIFT button and the HOLD button in order to choose a ringing pattern.

The loudness of the tone ringer can be controlled by the VOLUME "arrow" button. (The user must NOT be on a speakerphone call. If the user is using the speakerphone, the VOLUME "arrow" button controls the volume of the speakerphone.)

Mounting Options

The 8410 voice terminal comes equipped with a 2-position desk stand. This stand can also be removed so the user can mount the set on the wall.

Color Options

The 8410 voice terminal is available in black and in white.

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Wiring Information

The 8410 voice terminal works in both 4-wire and 2-wire DCP configurations. The table below describes the pins on an 8400-Series voice terminal LINE jack.

Table 12-12. The Pins on an 8400-Series Voice Terminal LINE Jack

Line Interface			
Pin	Pair	Name	Description
1	2	OD1	4-Wire Output
2	2	OD2	4-Wire Output
3	3	ID1	4-Wire Input
4	1	U-T	2-Wire (Tip)
5	1	U-R	2-Wire (Ring)
6	3	ID2	4-Wire Input
7	4	P1-	Adjunct Power -48V
8	4	P2+	Adjunct Power Common

NOTE:

Regardless of which configuration is in use, ALL wiring between the PBX and the terminal MUST consist of twisted-pairs, including the modular line cord. The line cord must be a D8W, which consists of 4 twisted-pairs, or a Lucent Technologies-approved equivalent.

Twisted-pair wiring is used to make lines less sensitive to crosstalk. Therefore, failure to use twisted pair wiring may result in less-than-optimum performance of the terminal and may also contribute to problems with the line.

An 8-wire modular cord MUST be used for all 4-wire and any 2-wire installations requiring auxiliary power.

NOTE:

You do NOT need to change any settings on the voice terminal for 2-wire or 4-wire installations. The voice terminal is able to detect whether it is in a 2-wire or a 4-wire configuration.

For 2-wire operation, if you need to plug the voice terminal into a 4-pin or 6-pin wall jack, instead of a standard 8-pin modular jack, refer to the "Line Interface" table to insure that the wires from the 4-pin or 6-pin wall jack are connected to the correct pins on the terminal "LINE" jack.

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In order for the terminal to function properly in either 2-wire or 4-wire installations, there must be NO INTERCONNECTIONS between the wire pairs used for 2-wire and 4-wire operations. Bridging or paralleling of these pairs can result in damage to the terminal or can cause the PBX circuit pack to remove power to the terminal.

REMOVE ALL CONNECTIONS BETWEEN PAIRS BEFORE CONNECTING THE TERMINAL.

4-WIRE installations MUST ONLY have PBX connections on pair 2 and pair 3 and, if necessary, auxiliary power must be connected to pair 4.

2-WIRE installations MUST ONLY have PBX connections on pair 1 and, if necessary, auxiliary power must be connected to pair 4.

Distance Limitations

The following circuit packs can be used with all of the 8400-Series sets.

Table 12-13. Circuit Packs Used with the 8400-Series Voice Terminals

Circuit Pack	2/4-Wire	Will support these switches
TN2181 - 16-port	2-wire	G3V2 and later
TN754b - 8-port	4-wire	All switches except System 85
TN754 - 8-port	4-wire	All switches except System 85
TN413 - 8-port	4-wire	International System 75
SN 270 and SN 270B - 4-port	4-wire	System 85 R2V2 - R2V4

In 4-wire operation, the voice terminal must be within 5,000 feet of the PBX using 22-gauge or 24-gauge wire, and within 4,000 feet of the PBX using 26-gauge wire.

In 2-wire operation, the voice terminal must be within 5,500 feet of the PBX using 22-gauge wire, within 3,500 feet of the PBX using 24-gauge wire, and within 2,200 feet of the PBX using 26-gauge wire.

Power Requirements

The 8410 voice terminal receives power from the system and does not require any external power supply. Additional external power IS required when the 8410 voice terminal is equipped with any adjuncts, such as an external speakerphone.

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In this instance, a 1151A1 local power supply or a 1151A2 power supply with Battery Holdover is recommended. Refer to the **Adjunct Power** section of this manual for more information on these power supplies.

Switch Administration

Aliasing

Use the following table for administering the 8410B (the basic) voice terminal:

Table 12-14. Administering the 8410B Voice Terminal

If you have this System	and this Release	(which can support this type of operation)	Administer the 8410B as a
System 75	R1V1 — R1V3	4-wire only	7403D
System 85	R2V2 — R2V4	4-wire only	7403D
International System 75	IR1V4, etc.	4-wire only	7403D
DEFINITY G1		4-wire only	7403D
Global DEFINITY'91		4-wire only	7410D
DEFINITY G2V1		4-wire only	7410D
DEFINITY G2V2		4-wire only	7410D
DEFINITY G3i, G3r, G3s, G3vs		4-wire only	7410D
DEFINITY G3V2		2- or 4-wire	7410D
DEFINITY G3V3 and later		2- or 4-wire	8410B

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Use the following table for administering the 8410D voice terminal (with display):

Table 12-15. Administering the 8410D Voice Terminal

If you have this System	and this Release	(which can support this type of operation)	Administer the 8410D as a
System 75	R1V1 — R1V3	4-wire only	7405D+D
System 85	R2V2 — R2V4	4-wire only	7405D+D
International System 75	IR1V4, etc.	4-wire only	7405D+D
DEFINITY G1	R1V4	4-wire only	7405D+D
Global DEFINITY'91		4-wire only	7405D+D
DEFINITY G2V1		4-wire only	7405D+D
DEFINITY G2V2		4-wire only	7405D+D
DEFINITY G3i, G3r, G3s, G3vs		4-wire only	7405D+D
DEFINITY G3V2		2- or 4-wire	7405D+D
DEFINITY G3V3 and later		2- or 4-wire	8410D

Button Numbering

The following button diagrams of the 8410 voice terminal will help you administer both of these voice terminals connected to a System 75, a DEFINITY G1 and G3, or a DEFINITY ECS, and to a System 85 or a DEFINITY G2.

Figure 13-13 shows button numbering for the 8410 connected to a System 75, a DEFINITY G1 and G3, or a DEFINITY ECS. Figure 13-14 shows button numbering for the 8410 connected to a System 85 or DEFINITY G2.

If you need more information, refer to *DEFINITY Communications System Generic 3 Implementation*, 555-230-653, and *DEFINITY Communications System Generic 2 Administration of Features and Hardware*, 555-104-507.

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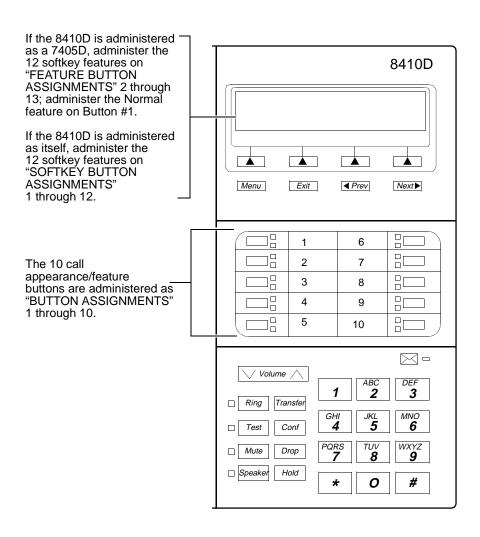


Figure 12-13. Button Numbering for Administering the 8410 Voice Terminal Connected to a System 75, a DEFINITY G1 or G3, or a DEFINITY ECS

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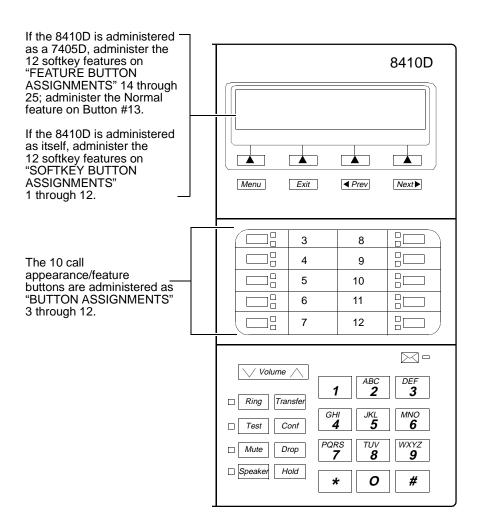


Figure 12-14. Button Numbering for Administering the 8410 Voice Terminal Connected to a System 85 or a DEFINITY G2

Power Failure Operation

The 8410 voice terminal cannot be used as an emergency station during power failure transfer conditions.

FCC Registration

The 8410 voice terminal is FCC-registered along with the switch (as a system), but does not have a separate FCC registration label.

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UL and CSA Approval

The 8410 voice terminal has been tested and has met the Underwriters Laboratories (UL) Standards UL 1459 and has also met the Canadian Standards Association (CSA) Standards CSA-C22.2 No.225-M90.

Hearing Aid Compatible

The 8410B and 8410D voice terminals are compatible with the inductively coupled hearing aids prescribed by the FCC.

8410 Equipment PECs and Comcodes

The 8410B and 8410D voice terminals and components can be ordered with these PECs and Comcodes:

■ Basic 8410B (8410D04A) Voice Terminal

Black 8410B Set PEC: 3234-04B

Comcode: 107703696;

White 8410B Set PEC 3234-04W

Comcode: 107703738

8410D (8410D03A) Voice Terminal (with built-in display)

Black 8410D Set PEC: 3235-05B

Comcode: 107702870;

White 8410D Set PEC: 3235-05W

Comcode: 107702920

K2S8 Handset

Comcode: Black=107545584; White=107545568

■ Handset cord (9 feet)

Comcode: Black=407632819; White=407632835

■ Line cord (7 feet)

Comcode: 103786778

■ Line cord (14 feet, silver)

PEC: 2725-07N (COL18) Comcode: 103786828

■ Line cord (25 feet, silver)

PEC: 2725-07S (COL18) Comcode: 103786802

■ Designation Card Cover

PEC: 32309

Comcode: 846320216

■ Button Designation Card

Tractor Feed For 25 Sets, 3 Sheets (12 cards per sheet)

PEC: 32310

Comcode: 847161817

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Tractor Feed For 100 Sets, 9 Sheets (12 Cards per Sheet)

PEC: 32311

Comcode: 847161916;

Laser Printer Forms (8 1/2"x11") 67 Sheets (6 Cards per Sheet)

PEC: 32312

Comcode: 847065497

Adjuncts

The following adjuncts can be used with the 8410 voice terminal:

- S101A Speakerphone (no longer orderable)
- S201A Speakerphone
- CS201A Speakerphone
- 7400B Plus Data Module
- 500A Headset Adapter (and a standard headset; see "Headsets" below)
- K6S2 Amplifier Handset
- Shoulder Rest

Headsets

A list of compatible headsets, consisting of both modular and plug prong base units and selection of headpieces, appears in "Headset Adapters" in the **Adjuncts** section (behind the **Adjuncts** tab) later in this manual.

Additional Documents

The following documents contain additional information relating to the 8410 voice terminal: (Use the 9 digit number listed after each document to order that book from the BCS Publications Center for Lucent Technologies.)

- 8403, 8410, and 8434 Voice Terminals Instructions for Installation, Switch Administration, and Programming the Options, 555-015-164
- DEFINITY Communications System Generic 1 and System 75 8410 Voice Terminal User's Guide, 555-230-763
- DEFINITY Communications System Generic 1 and 3 and System 75 8410 Quick Reference Guide, 555-230-764
- DEFINITY Communications System Generic 2 and System 85 8410 Voice Terminal User's Guide, 555-104-763
- DEFINITY Communications System Generic 2 and System 85 8410 Quick Reference Guide, 555-104-764